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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,882	02/24/2004	Ulrich Kluter	01950/0200719-US0	1901
7278	7590	09/01/2005	EXAMINER	
DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			MATHEWS, ALAN A	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,882	Applicant(s) KLUTER ET AL. 	
	Examiner Alan A. Mathews	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 5,7-10,15 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/24/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Futakami et al (U. S. Patent Application Publication No. 2002/0097383 A1). Futakami et al. discloses in figures 3 and paragraph # 22, an LED unit 211 (with three colors), a liquid crystal shutter array 215 (pixel generating device), and a light-sensitive material 100. Figure 8 and paragraph # 51 disclose a printer CPU 601 (control device) which drives the liquid crystal shutter (pixel generating device). Figure 4 and paragraph # 35 discloses an LCS pulse “(e)” which shows a predetermined voltage applied to the liquid crystal shutter elements and which alternates between a positive voltage and a negative voltage (although the period of positive voltage and the period of negative voltage are not adjacent to each other). Each of the positive voltage and negative voltage is for half duration of the emission of any one of the LEDs (see figure 4 (c)), which means that the half-periods of negative and positive voltage would add up to a full period . With respect to claim 4, the exposure time break would be when the voltage is at zero (see figure 4 (e)). With respect to claim 6, paragraph # 26 discloses detector 500 with elements 501, 502, and 503, which detect the magnitude of the light power.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Futakami et al. (U. S. Patent Application Publication No. 2002/0097383 A1) in view of Irwin (U. S. Patent No. 6,057,820). Futakami et al. discloses in figures 3 and paragraph # 22, an LED unit 211, a liquid crystal shutter array 215 (pixel generating device), and light-sensitive material 100. Figure 8 and paragraph # 51 disclose a control device including printer CPU 601. Figure 4 and paragraph # 35 discloses an LCS pulse (e) which shows a predetermined voltage applied to the liquid crystal shutter elements and which alternative between a positive voltage and a negative voltage (although the period of positive voltage and the period of negative voltage are not adjacent to each other). The Examiner contends that each of the positive voltage and negative voltage is for half duration of the emission of any one of the LEDs, which means that the half-periods of negative and positive voltage would add up to a full period. But if Applicant argues this point, Irwin discloses in figure 6 and column 6, lines 40-67 and column 7, lines 1-35, alternating between positive voltage and negative voltage (polarity mode). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide

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Futakami et al. with half-periods of negative and positive voltage adding up to a full period having a period length in view of Irwin for the purpose of improved exposure control.

Allowable Subject Matter

5. Claims 5, 7-10, 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

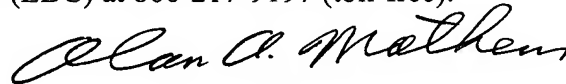
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents cited in the PTO-1449s are cited for the same reasons they were cited in Applicant's IDSs. The patent to Rohner is cited to show an LCD panel used in a photolithographic exposure system. The patent to Murakami et al. is cited to show a driving method for an electro optical device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews
Primary Examiner
Art Unit 2851

AM